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EXAMINER

SHAW, JOSEPH D

ART UNIT

PAPER NUMBER

2141

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6

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/677,440

Applicant(s)

BERO, RAYMOND

Examiner

Joseph D Shaw

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 42-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over register.com (www.register.com - Domain Name Registration Services) in view of Kwan et al. (6,411,966).

3. Rejections made with www.register.com - Domain Name Registration Services refer to pages collected from the site dated August 24<sup>th</sup> as listed in the attached References Cited. Though these pages are listed as separate references, the combined references will be treated as one reference since they have the same date and were retrieved from the same site.

a. As per claims 42 and 45, register.com teaches:

means for providing the remote user with a displayable copy of the DNS information (user logs in and is presented DNS information; DNS Questions and Answers, pages 2-4);

means for receiving from the remote user a specified change to a portion of the DNS information (assign and delete authoritative name servers; DNS Questions and Answers, pages 2-4); and

means for updating a portion of the actively used DNS information to reflect the specified change (changes are submitted to the registry; DNS Questions and Answers, pages 5-6).

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However, the register.com invention does not explicitly teach dynamically updating the DNS information. Kwan teaches that DNS servers can be updated dynamically (col. 7, lines 11-20; col. 16, lines 1-7). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the updating in the register.com invention be done dynamically, as taught by Kwan, because dynamic DNS updating is an Internet Standard, set forth by RFC 2136, and can be implemented by any client, as taught by Kwan (col. 16, lines 1-7).

b. As per claim 43, register.com discloses the modified invention as described above and furthermore teaches:

the DNS information dynamic updater and provider components executing in a memory of the computer devices (inherent that instructions on a computer are executed in memory).

c. As per claim 44, register.com discloses the modified invention as described above and furthermore teaches:

the displayable copy being a Web page (DNS Questions and Answers, page 4); and

a DNS visual updater component capable of creating the Web page (each web page viewed is custom tailored to contain data relating to the particular user/domain name logged in; DNS Questions and Answers, pages 1-9).

4. Claims 1-41 and 46-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over register.com (www.register.com - Domain Name Registration Services) in view of Admitted Prior Art (APA), and further in view of

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Patterson et al. (Computer Organization & Design: The Hardware/Software Interface).

5. Rejections made with [www.register.com](http://www.register.com) - Domain Name Registration Services refer to pages collected from the site dated August 24<sup>th</sup> as listed in the attached References Cited. Though these pages are listed as separate references, the combined references will be treated as one reference since they have the same date and were retrieved from the same site.

d. As per claim 1, [register.com](http://register.com) teaches a method of displaying DNS information comprising:

a customer device sending a request to a computer for DNS information for the domain name, and receiving DNS information from the stored DNS RRs in response;

a computer receiving the sent request from the device and sending a copy of the DNS information in response;

the customer device displaying the received DNS information to the customer (DNS Questions and Answers, pages 2-4);

the customer device receiving an indication from the customer of a change to displayed DNS information that corresponds to a first of the DNS RRs and instructing the computer to modify the DNS information for the first DNS RR to include the changed DNS information; and

the computer receiving instructions to modify the DNS information (DNS Questions and Answers, pages 4-6).

However, the [register.com](http://register.com) invention does not *explicitly* teach the computer responding to a plurality of DNS requests, modifying DNS information when instructed to, and responding to DNS requests afterwards with the updated information. APA teaches:

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the computer responding to requests from clients for DNS information about the domain name by sending copies of cached DNS information that was read from the stored DNS RRs (a computer requests an IP address and an authoritative domain name server responds with the appropriate IP; information about a domain is loaded into the server cache from zone data files; page 3, lines 16-19, 25-29; page 4, lines 1-6); and

the computer responding to DNS update instructions by updating the first DNS RR in the stored first zone data to contain the changed DNS information (changes made to an existing zone data file; page 8, lines 27-29; page 9, lines 1-12).

However, the modified register.com invention still does not explicitly teach modifying an update file to indicate that the stored zone data file has been updated so that before DNS information from the first DNS RR is next sent to a client, the indication of the stored zone data file in the modified update file will cause the changed DNS information for the first DNS RR in the updated stored zone data file to replace the cached information for the first DNS RR.

Patterson teaches a method of cache coherency, where multiple processors may have a common copy of data in their respective caches, and when one cache updates a value of the data (therefore updating that value in main memory) the status bits for other caches are set to "invalid" (pages 720-724). Applying this example to the present invention, the client and the DNS computer are separate processors (with their respective caches) and the zone data file can be seen as the main memory. The client updates a value of DNS information, and it propagates to the zone data file. Since the value was updated, the

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status bit for the computer serving DNS information is marked invalid (updating a Update file), so that next time the DNS computer uses that cached data, it sees that it must replace the cached data with the updated data in the zone data file.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include, in the modified register.com invention, a method of invalidating cached data in the computer so that valid data is always processed, as taught by Patterson, because it is beneficial to network performance to have a DNS computer provide up to date DNS information to all clients, minimizing timeouts and processing errors.

e. As per claim 2, register.com discloses the modified invention as described above and furthermore teaches:

displaying information to the customer related to registering new domain names; and

receiving an indication from the customer to register the domain name (Registering a New Domain Name Questions and Answers, pages 1-4).

However, the modified register.com invention does not *explicitly* teach the computer creating and storing DNS RRs in the zone data files. APA teaches:

creating the first zone data file to hold the DNS information for the domain name; and

storing the DNS RRs in the first zone data file on the computer (page 8, lines 13-35).

It would have been obvious to one of ordinary skill in the art to have the modified register.com invention create new DNS records the way

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it is disclosed by APA because this is a well-known method utilized by DNS servers for adding DNS information.

f. As per claim 3, register.com discloses the modified invention as described. However, the modified register.com invention does not explicitly teach periodically checking the update file. APA teaches:

periodically checking to determine if any stored zone data files have been updated (page 9, lines 20-29).

It would have been obvious to one of ordinary skill at the time of the invention to apply, towards the update file of the modified register.com invention, periodically checking if a zone data file has been updated, as taught by APA, because the update file specifies whether cached zone data is valid, and allows a DNS computer to update data prior to receiving a client request, providing less latency in responding to client requests.

g. As per claim 4, register.com discloses the modified invention as described. However, the modified register.com invention does not explicitly teach reloading all zone data files after determining that they need to be reread. APA teaches:

determining that all of the stored zone data files are to be reread; and

reading the DNS information from each of the stored zone data files and replacing the previously cached DNS information with the read DNS information (rereads changed files, could be all; page 9, lines 20-27).



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It would have been obvious to one of ordinary skill in the art at the time of the invention to include reloading all zone data files after determining that they need to be reread, as taught by APA, in the modified register.com invention because this ensures that DNS servers will provide the most current information to clients since the most current information is in the cache.

h. As per claims 5-6, register.com discloses the modified invention as described above and furthermore teaches:

the copy of the DNS information sent to the device being a Web page (DNS Questions and Answers, page 4);

the Web page containing multiple selectable indications each associated with a portion of the DNS information, the displayed indications such that selection of an indication by the user indicates a change to be made to the DNS information portion that is associated with the selected indication (multiple text boxes; delete check boxes; yes or no submit buttons; DNS Questions and Answers, page 4).

i. As per claim 7, register.com discloses the modified invention as described above and furthermore teaches:

the DNS information for the domain name having associated access authorization information and including receiving the access authorization information from the device before updating the first DNS RR in response to the instruction (user must log in prior to making changes; DNS Questions and Answers, pages 2-3).

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j. As per claims 8-9, register.com discloses the modified invention as described. However, the modified register.com invention does not explicitly teach providing connectivity service. APA teaches:

the service provided to the customer being a connectivity service; and

the service provided to the customer being a hosting service (page 7, lines 17-25).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have the modified register.com invention also provide connectivity service and web hosting services, as taught by APA, because this service is another way for the company to make money.

k. As per claim 10, register.com discloses the modified invention as described above and furthermore teaches:

the service provided to the customer being that the computer acts as a primary name server for a zone including the domain name (register.com servers are listed as the name servers; DNS Questions and Answers, pages 2-3).

l. As per claim 11, register.com discloses the modified invention as described. However, the modified register.com invention does not explicitly teach receiving a payment from the customer for the updating of the first DNS RR. "Official Notice" is taken that both the concept and advantages of receiving a payment for providing a service are well known and expected in the art.

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It would have been obvious to one of ordinary skill in the art at the time of the invention to include, in the modified register.com invention, receiving a payment from the customer for the updating of the first DNS RR, because this allows the company to make money for the services they provide.

m. As per claim 15, register.com discloses the modified invention as described. However, the modified register.com invention does not explicitly teach DNS information being stored in a database and updating the database to reflect changes. APA teaches:

the portion of DNS information being stored in a database and wherein the dynamic updating of the portion includes modifying the stored DNS information portion of the database to reflect the specified change (when changes occur primary servers update their information and sometime propagate the changes to other root servers associated with the DNS database; page 8, lines 13-25).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include a database with DNS information and modifying that database when information changes, as taught by APA, in the modified reister.com invention because it is well known in the art that DNS servers implement databases to hold information, and if a DNS server is going to provide up-to-date information, their databases should be updated to reflect the up-to-date information.

n. As per claim 17, register.com discloses the modified invention as described above and furthermore teaches:

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the displayed selectable indication corresponding to a new value for the associated DNS information portion (blank boxes to add new name servers, delete check box to delete name servers; DNS Questions and Answers, pages 3-5).

o. As per claim 18, register.com discloses the modified invention as described above and furthermore teaches:

providing the remote user with a displayable copy of account information associated with the remote user (Contact Information Questions and Answers, pages 2-4).

p. As per claims 19-21, register.com discloses the modified invention as described above and furthermore teaches:

the specified change being a(n) modification of previously stored DNS information; deletion of previously stored DNS information; and addition of new DNS information (modify DNS page; blank boxes to add new name servers, delete check box to delete name servers; DNS Questions and Answers, pages 3-5).

q. As per claim 22, register.com discloses the modified invention as described above and furthermore teaches:

a primary name server computer for the DNS information, that server sending the updated DNS information portion to each slave name server computer for the DNS information (register.com servers are listed as name servers, one must be primary, primary name servers are responsible for updating secondary name servers with domain information; DNS Questions and Answers, pages 3-5, 10).

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r. As per claims 23-26: register.com discloses the modified invention as described. However, the modified register.com invention does not explicitly teach DNS information including resource, configuration, whois, and delegation records. APA teaches:

the stored DNS information including resource records, configuration records, whois records, and delegation records (page 5, lines 24-29; page 6, lines 1-29; page 7, 1-3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include, as taught by APA, resource, configuration, whois, and delegation records in the DNS information of the modified register.com invention because it is well known in the art that this information is often associated with DNS records in name servers.

s. As per claim 27, register.com discloses the modified invention as described above and furthermore teaches:

the stored DNS information being associated with a domain name (when user logs in, they have to specify the domain name; DNS Questions and Answers, page 3).

t. As per claim 28, register.com discloses the modified invention as described above and furthermore teaches:

displaying information to the customer related to registering new domain names; and

receiving an indication from the customer to register the domain name (Registering a New Domain Name Questions and Answers, pages 1-4).

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However, the modified register.com invention does not *explicitly* teach the storing of the DNS information. APA teaches:

storing the DNS information in a manner associated with the domain name (page 8, lines 13-35).

It would have been obvious to one of ordinary skill in the art to have the modified register.com invention create new DNS records the way it is disclosed by APA because this is a well-known method utilized by DNS servers for adding DNS information.

u. As per claims 29-31, register.com discloses the modified invention as described above and furthermore teaches:

determining that the remote user is authorized before dynamically updating the DNS information portion for the domain name (user must log in with user name/password; DNS Questions and Answers, pages 2-4).

However, the modified register.com invention does not *explicitly* teach the authorized remote user being an administrative contact, owner, or member of a group of authorized users of the domain. "Official Notice" is taken that both the concept and advantages of having administrative contacts, owners, or members in an authorized group be authorized to modify DNS information are well known and expected in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the authorized user in the register.com invention be one of the above mentioned individuals because it is well known that these individuals are generally the only persons one would want making changes to domain information.

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v. As per claim 33, register.com discloses the modified invention as described above and furthermore teaches:

dynamic updating being provided as a service to the remote user (register.com provides account management through Domain Manager; DNS Questions and Answers, pages 1-19).

w. As per claim 34, register.com discloses the modified invention as described. However, the modified register.com invention does not explicitly teach receiving a payment from the remote user for the providing of the service. "Official Notice" is taken that both the concept and advantages of receiving a payment for providing a service are well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include, in the modified register.com invention, receiving a payment from the remote user for providing of a service, because this allows the company to make money for the services they provide.

x. As per claims 40-41, register.com discloses the modified invention as described above and furthermore teaches:

the invention having computer readable mediums in the form of memory in a computer and a data transmission medium transmitting a generated data signal containing the contents (inherent that the register.com web site is on a computer that has memory and that web sites communicate data over a data transmission medium).

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y. As per claim 53, register.com discloses the modified invention as described above. However, the modified register.com invention does not *explicitly* teach the remote device being capable of presenting the DNS information to the client in a manner compatible with the display capabilities of the device.

"Official Notice" is taken that both the concept and advantages of providing scrollbars in an application that contains more data than can fit on a screen are well known and expected in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to include presenting information in a manner consistent with the capabilities of the device in the modified register.com invention because the it is common practice to provide a way for an application to present all of the data it is required to present.

z. As per claim 55, register.com discloses the modified invention as described above and furthermore teaches:

the current DNS information being maintained by the computer of the registrar (register.com; DNS Questions and Answers, pages 1-19).

However, the modified register.com invention does not explicitly teach updating a computer for a higher-level domain to include a delegation record for the new domain that indicates the computer of the register.

APA teaches that a higher-level name server (for MicronPC.com) needs to contain information allowing it to delegate requests about lower-level domains to their respective name servers (for foo.MicronPC.com; page 6, lines 14-21).



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It would have been obvious to one of ordinary skill in the art at the time of the invention to have the dynamic modifications in the modified register.com invention include dynamically modifying the delegation records taught by APA because doing this alleviates the burden of handling all DNS requests from higher-level domain servers.

aa. As per claim 56, register.com discloses the modified invention as described above. However, the modified register.com invention does not explicitly teach the higher-level domain being a top-level domain. APA teaches:

the higher-level domain being a top-level domain (name servers for ".com" would know the authoritative name servers for "MicronPC.com"; page 5, lines 15-23).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have the higher-level domain in the modified register.com invention be a top-level domain, as taught by APA, because now the ".com" name server can delegate other names servers to handle lower-level domain requests, thus distributing the load of handling the requests.

bb. Claims 12-14, 16, 32, 35-39, 46-52, 54, and 57-69, recite similar limitations as taught above mentioned rejections and are rejected under the same rationale.

#### **Conclusion**

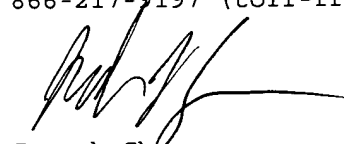
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D Shaw whose telephone number

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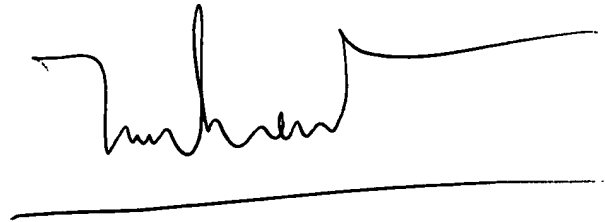
is 703-305-0094. The examiner can normally be reached on Monday - Thursday and alternate Fridays, 7am - 4pm.

7. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharra can be reached on 703-305-4003. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joseph Shaw  
Examiner  
AU 2141



LE HIEN LUU  
PRIMARY EXAMINER